

Sigl et al.

S/N: 10/604,252

REMARKS

Claims 1-25 are pending in the present application. In the Office Action mailed November 5, 2004, the Examiner rejected claims 1, 3, 4, 6, 7, 8, and 11 under 35 U.S.C. §102(b) as being anticipated by Buller et al. (USP 4,978,638). The Examiner next rejected claims 12-15, 17-21, and 23-24 under 35 U.S.C. §102(b) as being anticipated by Earl et al. (USP 5,304,735). Claims 2 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Buller et al. Claims 5 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Buller et al. in view of Earl et al. Claims 16 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Earl et al. Claim 25 was rejected under 35 U.S.C. §103(a) as being unpatentable over Earl et al. in view of Buller et al. Applicant appreciates the Examiner's withdrawal of the provisional double patenting rejection.

While the claims have been amended, it is believed that the amendments do not change the scope of the claims beyond the search already conducted by the Examiner. It is believed that the amendments clearly place the claims in condition for allowance. Accordingly, Applicant respectfully requests entry of this after-final amendment to expedite examination and place this case in condition for allowance.

Applicant has amended claim 1 to further define that which is claimed therein. As amended, claim 1 calls for, in part, that the exterior portions of the heat sink have elongated ridges have a bottom that is displaced from the base of the heat sink in the direction of extension of the exterior portions a distance. Clearly, neither Buller et al. nor Earl et al. has such a ridge. That is, the ridge of Buller et al. is within the base, and the ridge of Earl et al. has a bottom that is parallel with its base.

Applicant has also amended claim 4. As amended, claim 4 calls for, in part, that each groove formed in the first and the last fin is offset from the base a distance of at least the thickness of the base. Again, Buller et al. has a ridge in the base, while Earl et al. has a ridge with a bottom portion aligned with the base, not offset from the base the distance at least equal to the thickness of the base.

Referring to Fig. 4 of Buller et al., grooves (34) formed in the heat sink (36) are formed in an end of the base. Furthermore, if grooves (34) of the heat sink (36) were moved or displaced any distance from the ends of the base of heat sink (36), the heat sink could not engage the fingers (30) of clip elements (28) of the housing (8). Additionally, Buller et al. states that "heat sink configuration 36, that is with only two sides thereof having grooves to engage clip 28, allows the same heat sink - plastic package combinations to be used in situation with different air flow

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patterns and directions" and that "[e]ven after being rotated 90 degrees, heat sink 36 may still be snap fit into the other pair of opposed, parallel clip 28 legs." Col. 4, lns. 27-34. Displacing the groove from the base would result in non-engagement of the groove with the clips, or alternatively, if the clips were extended to cooperate with a displaced groove, the extension of the clips could block the air flow directed to pass through the heat sink. It is noted that since heat sink 36 and base surface 16 are designed to allow heat sink 36 to be inserted into base 16 in multiple orientations, any extension of clips 28 would require that all four clips 28 would be extended. Such an extension of the end clips 28 would effectively reduce the airflow through the heat sink 36. A person of ordinary skill in the art would appreciate that reducing the air flow through a heat sink would render the heat sink less suitable for its intended purpose – to dissipate heat from electronic components. One would not be inclined to modify the device such that air flow is reduced.

For all the reasons set forth above, not only is that which is called for in claims 1 and 4 not shown in Buller et al., Buller et al. fails to teach or suggest such a modification from that which is shown therein. Accordingly, Applicant believes claims 1 and 4, and those claims that depend therefrom, respectively, are patentably distinct over Buller et al. Applicant has amended claims 5 and 8 such that these claims comport with the amendments to the claims from which they depend.

The Examiner next rejected claims 12 and 19 under 35 U.S.C. §102(b) as being anticipated by Earl et al.. Applicant has amended claim 12 to further define that which is called for therein. As amended, claim 12 calls for, in part, a heat sink having a base with a thickness and a pair of external surfaces that extend from the ends of the base a length greater than the thickness of the base. Similar to Buller et al., Earl et al. discloses a heat sink having grooves at opposite ends on the base thereof. As shown in Fig. 2 of Earl et al., a bottom of groove (16) is flanked by a lip (20) and a divergent fin. Groove (16) is not displaced from the base (13) of heat sink (10). Referring to Figs. 3B and 3C, if lip (18) extended from the base a length greater than the thickness of base (13), clips (40) would not engage pin grid array (30) but would collide with base (13). As such, that which is called for in claim 12 is neither shown or disclosed nor taught or suggested in Earl et al.. Accordingly, Applicant believes claim 12, and those claims that depend therefrom are patentably distinct over Earl et al..

Applicant has also amended claim 19 to further define that which is called for therein. As amended, claim 19 calls for, in part, a retention ridge having an opening therein that is constructed such that no portion of the ridge is co-planar with any portion of the base. It is noted

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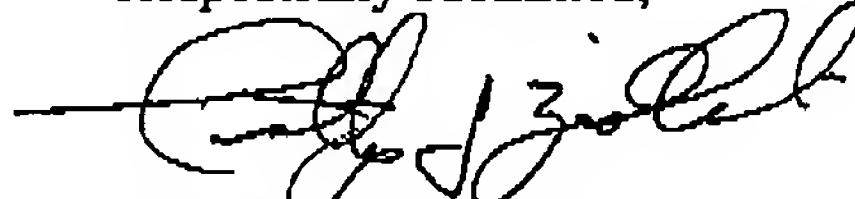
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that Buller et al. has its ridge in the base, and it is, therefore, co-planar with the base. Earl et al. has its ridge slightly elevated from the base, but the bottom edge of the opening of this ridge is co-planar with its base. Claim 11 calls for a retention ridge with an opening wherin no portion of the ridge is co-planar with any portion of the base. As such, at least for the reasons set forth above, Applicant believes that which is called for in claim 19, and those claims that depend therefrom, are patentably distinct over the art of record.

Accordingly, at least for the reasons set forth above, Applicant believes that which is called for in claims 1-25 is patentably distinct over the art of record. Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-25.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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